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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,624	10/30/2000	Michael Goldstein	12808.7US11	7054

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MERCHANT & GOULD PC  
P.O. BOX 2903  
MINNEAPOLIS, MN 55402-0903

EXAMINER

AN, SHAWN S

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 05/22/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/699,624

Applicant(s)  
Michael Goldstein et al.

Examiner  
Shawn An

Art Unit  
2613



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Mar 4, 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 7, 9-17, 20, and 21 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 9-17, 20, and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Response to Amendment***

1. As per Applicant's instructions in Paper 14 as filed on 3/4/03, claims 1 and 20 have been amended and claims 5, 8, and 18-19 have been canceled.

### ***Response to Remarks***

2. Applicant's arguments with respect to claims 1-4, 6-7, 9-17, 20, and 21 have been considered but are moot in view of the new ground(s) of rejection based on same references (Street and Watanabe). Further, in response to the interview summary filed on 2/5/03, after an extensive review of Street and Watanabe references, the Examiner considers the proposed amendment (amended limitations) to be still broad enough to merit a rejection. Detailed claims rejection are discussed in the following paragraphs.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6-7, 9-17, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Street (6,075,555) in view of Watanabe (5,812,187).

**Regarding claims 1, 11, 15, and 20,** Street discloses a stereoscopic device comprising:  
at least two apertures (Fig. 3, 41) including a light valve being operative to open at a different predetermined timing (col. 6, lines 34-50);

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a multiwavelength light sensor array (32) for detecting a plurality of frames;

an illuminating unit (Fig. 1, 1); and

a controller (43) coupled with the multiwavelength light sensor array, wherein the controller timing the operation of the multiwavelength light sensor array, to detect a plurality of images, for each of the images only a single one of the light valves exhibits an open state (col. 6, lines 36-50).

Street does not specifically disclose a controllable multi wavelength illuminating unit producing at least two alternating beam of light as being in a different range of wavelengths and only one of the at least two alternating beams of light illuminating the detected scene, and detecting a selected illuminating one of the beams.

However, Watanabe teaches an endoscope (Fig. 1) including a conventional controllable multi wavelength illuminating unit (5) producing at least two alternating beam of light (7) as being in a different range of wavelengths, wherein only one (sequentially) of the at least two alternating beams of light illuminates an object or a scene, and detecting (2) a selected illuminating one of the beams.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a stereoscopic device as taught by Street to incorporate the Watanabe's controllable multi wavelength illuminating unit in place of the Street's illuminating unit being so as to produce at least two alternating beam of light (R, G, B) having a different range of wavelengths wherein only one (sequentially) of the at least two alternating beams of light illuminates an object or a scene, thereby the Street's controller detects a plurality of images (frames) including a selected open one of the apertures and at least a selected illuminating one of the beams, for each of the images only a single one of the light valves exhibits an open state, wherein only one of the at least two alternating beams of light illuminates an object or a scene for generating a more accurate color video signal, thus improving an image quality.

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**Regarding claims 2 and 3**, the Examiner takes official notice that it is obvious to include two groups of sensor or a plurality of sensors so that each group of sensor can detect light in a different wavelength such as blue or red or green.

**Regarding claims 4 and 7**, incorporating the combination of Street and Watanabe's's references, it is considered a simple design choice for the Watanabe's's illuminating unit (5) to surround the Street's aperture (41) or to direct light aside from the aperture in order to efficiently illuminate different range of wavelengths to a maximum level.

**Regarding claim 6**, Watanabe's teaches a multiwavelength light source (6 or 7); a light dispersing unit inherently shown (Fig. 1), but not indicated as an element; and light guiding means (3) connected between the light source and the light dispersing unit for guiding light.

**Regarding claim 9**, Street discloses a controller (43) connected to the light valves, the light sensor array, and would have been obvious to Watanabe's's illumination unit, for timing the operation of the light valves, the sensor array, and also would have been obvious to the Watanabe's's illumination unit.

**Regarding claim 10**, Street discloses a storage unit (50 or 51) for storing captured data.

**Regarding claim 12**, Street discloses a stereoscopic display unit (abs.) for producing the images.

**Regarding claims 13 and 14**, Street discloses a wavelengths consisting of visible red, green blue colors light (7). Furthermore, it is considered quite obvious to add more conventional colors such as cyan, yellow, magenta, infra-red, ultra-violet, and visible light.

**Regarding claim 16**, since Street discloses RGB sensor array, it is considered ~~quite~~ obvious to include/substitute CYMG sensor array so as to detect different wavelengths.

**Regarding claim 17**, Watanabe's teaches an image processing (20a-21a) connected to the CCD sensor and the illuminating unit. Further, it is ~~inherently~~ well known for a stereoscopic device, such as a stereoscopic endoscope, to include an image processing for processing images for display on display monitor. Therefore, incorporating the combination of Street and

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Watanabe's's references, it is considered quite obvious to utilize an image processor such as Watanabe's's image processor, to be connected to the Street's light sensor array, and the Watanabe's's illuminating unit.

**Regarding claim 21**, the Examiner takes official notice that it is conventionally well known for a conventional stereoscopic device to reconstruct a stereoscopic image from a sensor or a camera, which comprises a plurality of frames as outputs, for display on the stereoscopic monitor.

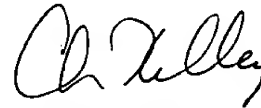
#### *Conclusion*

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday-Friday.



CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600



SSA

May 11, 2003